



Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

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September 29, 2011

Mr. Paul Rosasco, P.E.
Engineering Management Support, Inc.
7220 West Jefferson Avenue, Suite 406
Lakewood, CO 80235

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SUPERFUND DIVISION

RE: Feedback to Response to Comments on draft Supplemental Feasibility Study (SFS)
West Lake Landfill Operable Unit 1, Bridgeton, Missouri

Dear Mr. Rosasco:

The Missouri Department of Natural Resources (MDNR) is providing the attached feedback to Response to Comments on the Draft Supplemental Feasibility Study (SFS) for West Lake Landfill Operable Unit 1 per the Respondents' request for this information in writing. This feedback has been compiled by the Department's Hazardous Waste Program, Federal Facilities Section, with assistance from other programs within the Department and other state agencies. This feedback was submitted to you previously via email to aid in the revisions to this document; based on the Department's original comments transmitted on November 19, 2010. This transmittal is being provided for future reference and documentation of the electronic correspondence.

The Department has identified several key issues during review of this document that are considered important variables to this study. Most of these issues were presented in the Department's original comments and are summarized again below for reference.

1. Verification of RIM (General Comment #1).
2. Volumes of waste proposed for relocation under the ROD remedy (General Comment #2 and Specific Comment #80).
3. Airport Negative Easement/FAA Advisory Circulars (General Comment #3).
4. Cap design for the ROD remedy (General Comment #7 and Specific Comment #86).
5. Design, location, and construction of an on-site disposal cell (General Comment #7 and Specific Comments #41, 54, 63-72).
6. Types of waste encountered during excavation (General Comment #9).
7. On-site railroad spur (Specific Comment #92).
8. Uranium cleanup level calculation (Specific Comment #20).
9. Applicable or Relevant and Appropriate Requirements (table provided).



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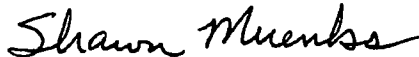
We feel that these issues could have huge impacts on the outcomes of the SFS and ultimately the final decision for remedial actions at West Lake Landfill. Special care and consideration should be given to these issues to ensure a fair comparison has been made between the new remedial alternatives and current Record of Decision remedy.

It is our understanding that EMSI will submit a revised SFS based on comments and feedback submitted by the U.S. Environmental Protection Agency (EPA) and the Department. It is also our understanding that EPA and the Department will be allowed to review the revised SFS prior to finalization of this document. The Department looks forward to review of the revised SFS and assisting in all aspects of finalization of this document, and understands the importance of this document to the final remedy at West Lake Landfill.

Thank you for giving us the opportunity to review and comment on this document. If you have any questions pertaining to this feedback please contact me by phone at (573)751-3107, or by written correspondence at P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

HAZARDOUS WASTE PROGRAM



Shawn Muenks, P.E.
Federal Facilities Section

SM:dd

c: Mr. Dan Gravatt, U.S. Environmental Protection Agency
Mr. Rich Kapuscinski, U.S. Environmental Protection Agency Headquarters

Enclosure

**EPA General Comment No. 2 and EPA Additional Comment No. 1 – Principal Threat
Wastes Analysis**

MDNR Feedback:

MDNR accepts the text provided by EPA for incorporation into the new section of the SFS that would present the characterization of the radiologically impacted materials (RIM).

EPA Additional Comment No. 2 – Reconciliation of NRC and RI Findings

MDNR Feedback:

As stated in previous comments, the MDNR feels that the location and volume of RIM are sensitive values that will have a huge impact on the overall costs of remediation. An accurate understanding of the nature and extent of contamination is necessary in order to compare the excavation alternatives presented in this Supplemental Feasibility Study. It was noted in EPA Feedback to this response that both studies concluded that the majority of the RIM is located within approximately 15 feet of the ground surface. Please include reference to this in Section 2.2.1 General Nature of the RIM, Section 2.2.3 RIM Occurrences Extent and Volumes and anywhere else in the SFS that discusses nature and extent of RIM.

EPA General Comment No. 1 – Project Plans

MDNR Feedback:

This response should also address MDNR General Comment No. 5 which asks for similar documents specified by EPA. The second paragraph of the section titled MATERIAL EXCAVATION/HANDLING METHODS states “All of the alternatives would require disturbance of the waste materials as part of regrading of the waste materials under the ROD-selected remedy...” and the section titled MATERIAL STOCKPILING references portions of the SFS that define volumes of waste that would be cut, moved and filled to achieve final sloping requirements. MDNR has expressed concern with relocation of waste under the ROD Selected Remedy (See MDNR General Comment No. 2). Please consider revising this response to reflect this concern. In addition, this response should include testing requirements for cap materials.

This response should also address MDNR Specific Comment No. 75 which refers to the Missouri Solid Waste regulations that do not allow excavation, disruption or removal from active or inactive solid waste disposal areas without prior approval from the Department [10 CSR 80-2.030(3) (A) thru (G)], in particular (D) – Requests for approval shall include “location where excavated material is to be deposited”. Please address these regulatory requirements in the discussion. At a minimum, MDNR requests that any potential locations chosen for stockpiling as indicated in Figure 001 be coordinated with the Department prior to stockpiling activities and that this response be revised to reflect this request.

EPA Specific Comment No. 5 – Floodplain Delineation

MDNR Feedback:

MDNR accepts the discussion provided for this comment.

EPA General Comment #5: Excavation Shoring

MDNR Feedback:

MDNR questioned the depth that sheet piling would be installed per the discussion. EMSI gave further explanation on why this was necessary during a previous conference call. Please include this added explanation in the discussion. Also include an analysis of any other stabilization techniques that may be applicable to reach deeper RIM.

EPA General Comment No. 3 – Use of Daily Cover Material

MDNR Feedback:

MDNR has considered and would support the use of Alternative Daily Cover (ADC) options that would reduce overall volumes compared to using conventional 6 inch soil cover (i.e. tarps or foams). These ADCs should be included in the SFS in addition to those discussed in this response to comment. Costs and risks for each daily cover option should be compared in order to select the best method of daily cover. In addition, use of portable temporary structures in lieu of daily cover should be investigated (see MDNR Feedback to EPA Additional Comment No. 7 – Bird Mitigation).

Be aware that any use of ADCs and procedures involved would need pre-approval from the Department prior to implementation. This can be achieved during the Record of Decision and Remedial Design phases.

In addition, extensive verbal discussions were held on use of tarps for daily cover. MDNR would like to see details from these discussions included in this SFS including benefits of eliminating use of soil as daily cover, ease of application and cost savings. Discussion on use of tarps as bottom liners under temporarily stockpiled waste should also be included in the document.

Waste Relocation under ROD Remedy Alternative

- EPA Additional Comment No. 34
- MDNR General Comment No. 2
- MDNR Section-Specific Comment No. 80

MDNR Feedback:

MDNR has expressed concern over the proposed relocation of waste for the ROD Selected Remedy as presented in the Supplemental Feasibility Study. The third paragraph under *Response to MDNR's Comment Regarding Inconsistency with ROD Remedy* references Section 12.2 of the ROD by stating, "It is anticipated that construction of the landfill cover will require the toe of the landfill berm to be regraded." This quote fails to include the remainder of this sentence which reads, "...and extended over the impacted area on the Buffer Zone/Crossroads Property." MDNR considers this statement to pertain to that area specifically which has room for laterally extending the toe of the landfill. Furthermore, the discussion references Section 9.1.4 of the ROD by stating, "Alternatively, the existing waste material and soil in these areas could be regraded (cut and filled) to achieve a minimum slope of two percent. Portions of the landfill berm that contains slopes greater than 25 percent would be regraded through placement of additional material or cutting and filling of existing material to reduce the slope angles to 25 percent subject to physical constraints associated with the location of the toe of the landfill relative to the property boundary." This section is part of the Description of Remedial Alternatives taken from the Proposed Plan and is not considered specifications of the ROD Selected Remedy, which is clearly defined in Section 12.2 Description of the Selected Remedy.

MDNR has compared the ROD Selected Remedy construction details with those given in the Supplemental Feasibility Study and concludes that there are no provisions for relocation of waste under the Selected Remedy except for reconsolidation of contaminated soil from the Buffer Zone/Crossroad Property. Specifically, Table 12-1 of the ROD has no provisions for relocation of waste whereas Appendix I of the SFS and subsequent discussion in this response to comments gives substantial volumes for relocation of waste in Areas 1 and 2 which may contain RIM. The SFS should be consistent with the ROD Selected Remedy construction details with the only changes being made in the form of updating unit costs as specified in the SFS Work Plan in order to make a fair comparison between the Selected Remedy and the new excavation alternatives. MDNR suggests that the description of the Selected Remedy be cut and paste from Section 12.2 of the Record of Decision for West Lake Landfill Site Operable Unit 1 dated May 2008 and all references to the Selected Remedy be consistent with this description.

The specific portions of Section 12.2 Description of the Selected Remedy that detail the construction of the landfill cover on Operable Unit 1 are as follows (please note that areas of two percent grade refer to the top of the landfill, not the side slopes):

"Prior to construction of the landfill cover, the areas will be brought up to grade using placement of inert fill and regrading of existing material as determined in the RD. Final grades will achieve

a minimum slope of two percent.

The landfill berm around Area 2 will be regraded through placement of additional clean fill prior to placement of the landfill cover resulting in an estimated 100 lateral feet of additional material between the current landfill toe and the toe at completion of the RA. In this area, the landfill is built over the geomorphic flood plain that is now protected by the Earth City Levee. In the unlikely event of levee failure during a 500-year flood event, the lowermost two feet of the toe of the landfill cover at the northwestern end of the Site could be impacted by the water. The Site is over a mile from the river and no high energy water would be expected. The flood protection needs of the toe of the landfill will be evaluated in design and appropriate bank protection methods will be used, e.g., rock rip rap apron. The vertical height of the flood protection feature will include a margin of safety over the 1993 flood level. Figure 12-1, showing a conceptual cross-section of the Selected Remedy, indicates the approximate flood level at the toe of the landfill.

Any radiologically contaminated soil on the Buffer Zone/Crossroad Property will be consolidated in the area of containment (Areas 1 or 2) prior to placement of fill material or construction of the cover. It is anticipated that construction of the landfill cover will require the toe of the landfill berm to be regraded and extended over the impacted area on the Buffer Zone/Crossroad Property. Although the extent of contamination on the Buffer Zone/Crossroad Property is thought to be minor, the precise nature and extent of contaminated soil is uncertain. Gamma scans and soil sampling will be used to support the RD and document the existing conditions. Any soil outside the footprint of the landfill will meet remediation goals that support unlimited use and unrestricted exposure and will be subject to verification sampling. Any excavation of contaminated material will include dust suppression and work place monitoring to ensure there is no release of fugitive dust."

EPA Additional Comment No. 7 – Bird Mitigation

MDNR Feedback:

MDNR does not agree with elimination of the second option, use of a temporary enclosure to protect the exposed excavation, without including the benefits from utilizing this technology in the Technology Screening. For instance, MDNR would like to see the benefits from allowing work to continue during inclement weather, protection of workers from the elements as well as protection of open excavations from stormwater accumulation included in the analysis. Details on how this would increase productivity, reduce worker risks, and offer increased protection from contaminant migration (groundwater as well as air migration) should be weighed against the drawbacks given in the fourth paragraph of the Proposed SFS Revisions on page 4. Temporary portable structures have been used on similar sites such as the Hanford Site. Enclosed is an article describing such structures (*Radwaste Solutions*, September/October 2007, pp. 47-50). It is our understanding that these structures require simple foundation supports that may be less complicated than those described in the Proposed SFS Revisions. More research into the types of structures best suited for this particular project as well as consideration of all the added benefits is needed.

Proximity to St. Louis Lambert International Airport

- EPA Specific Comments Numbers 27 and 37
- EPA Additional Comment Number 20
- MDNR General Comment Number 3
- MDNR Section-Specific Comments Numbers 33, 34, 35, and 104

MDNR Feedback:

MDNR reiterates its position in Section-Specific Comment No. 104 that the Negative Easement or the FAA Advisory Circular should not obstruct the implementability of the new alternatives. MDNR does not agree with the determination in Attachment E – Administrative Implementability for “Complete Rad Removal” with Onsite Disposal Alternative, *Ability to Obtain Approvals from Other Agencies*, which states, “Based on the September 20, 2010 letter from the STLAA (Appendix B), it is not likely that STLAA’s approval would be granted and therefore, this alternative may not be administratively implementable. Please provide additional discussion on administrative procedures that can be taken to secure STLAA’s cooperation or to alleviate this constraint altogether (i.e. additional meetings with STLAA to further explain bird mitigation measures or amendments/waiver to the Negative Easement). Also include discussions as appropriate on the administrative process necessary to avoid violation of the 1998 FAA ROD (i.e. amendments to the ROD) as stated in the last paragraph of Attachment C.

Mixed Waste; Waste Acceptance; and Reduction of Toxicity, Mobility or Volume through Treatment Comments

- EPA General Comment No. 4
- EPA Specific Comments Nos. 12, 56, 57, and 58
- MDNR General Comment No. 9
- MDNR Section-Specific Comment No. 93

MDNR Feedback:

The response to MDNR Comment No. 9 fails to address the last part of the comment concerning special requirements for handling and stockpiling of characteristic Hazardous Waste that would be considered Applicable or Relevant and Appropriate Requirements. Also please discuss any on-site treatment methods that may be appropriate for the remedial alternatives and associated cost comparison to off-site treatment.

Transportation appears to be the biggest cost in dealing with mixed waste. Is it cheaper to use rail as method of transport to off-site disposal facility for the ROD remedy and on-site engineered cell alternative? MDNR would like to see both methods of transportation costs calculated for the various alternatives.

MDNR offers the following regulations as potential ARARs concerning transportation, storage, treatment and/or disposal of RCRA wastes:

- 40 CFR Part 261, as incorporated by reference in 10 CSR 25-4.261. Containerized or bulked wastes that are removed for off-site disposal shall be subject to hazardous waste determination requirements.
- 40 CFR Part 262, as incorporated by reference in 10 CSR 25-5.262. Hazardous waste removed and/or containerized for shipment off-site should be handled in accordance with the applicable generator regulations.
- 40 CFR Part 263, as incorporated by reference in 10 CSR 25-6.263. Hazardous wastes that are removed for off-site disposal shall be handled in accordance with the applicable transportation regulations.
- 40 CFR Part 264 Subpart F, as incorporated by reference in 10 CSR 25-7.264(2)(F). Some regulations governing the monitoring and management of contaminated groundwater that originated from releases from Solid Waste Management Units may apply.
- 40 CFR Part 264 Subpart I, as incorporated by reference in 10 CSR 25-7.264(2)(I). These are the regulations that govern the use and management of containers.
- 40 CFR Part 264 Subpart N, as incorporated by reference in 10 CSR 25-7.264(2)(N). These are the regulations that govern land disposal and/or capping of past disposal areas.

- 40 CFR Part 264 Subpart CC, as incorporated by reference in 10 CSR 25-7.264(1), and the additional state requirements found at 10 CSR 25-7.264(2)(CC). Air emission standards for tanks, surface impoundments, and containers may apply.
- 40 CFR Part 268, as incorporated by reference in 10 CSR 25-7.268(1). The land disposal restrictions will apply to disposal of any soils and/or groundwater generated during the excavation activities at the facility whether they are disposed of on-site or off-site.
- 40 CFR 264.554, as incorporated by reference in 10 CSR 25-7.264, staging pile requirements for any stockpiling, storing or other accumulation of remediation waste may apply.

EPA Specific Comment No. 9 – Mitigative Measures for Activities Conducted in Floodplains

MDNR Feedback:

MDNR accepts the SFS Text Revisions with the following suggestion: Consider including a description of the Earth City levee system and the frequency and type of inspections as part of the mitigative measures. Please elaborate on which "Executive Order" is being referenced in the first sentence of the second paragraph. Also it should be noted that rip-rap armoring at the toe of the landfill at Area 2 and stormwater detention basins are necessary mitigative measures for all of the alternatives.

EPA Specific Comments No. 30 and 31 and MDNR Section-Specific Comment No. 87

Residual Risk

MDNR Feedback:

Regarding MDNR Section-Specific Comment No. 87, this comment directly references Section 6.2.1.3.1 yet there is no revision for this section provided in the Proposed SFS Revisions.

After review of the revised Section 6.2.2.3.1 *Magnitude of residual risk*, MDNR suggests that risk from exposure to non-radiological contaminants should be calculated and added to the radiological residual risk calculations presented in this section. This will support the main assumptions presented in this section that this alternative is also protective for exposure to non-radiological landfill waste. Bear in mind that the cap design is not uniform for all alternatives (i.e. armoring layer and radon barrier are not required for "complete rad removal" alternatives). The non-radiological risk calculation should be included for the other alternatives and design differences should be mentioned as they affect exposure to non-radiological contaminants.

The revision for Section 6.2.2.3.2 *Adequacy and reliability of controls* states that, "There are several areas where RIM is located at substantial depth and two of these areas are located adjacent to the closed demolition landfill or the inactive sanitary landfill." MDNR is not convinced that RIM is present at these depths; suggest changing "is" to "may be". This section goes on to state, "These conditions would increase the potential for failure of the adjacent landfill units during implementation of the remedy and the potential that all of the RIM would not be removed from Area 2." Inability to remove all RIM from Area 2 is not a general theme that is carried throughout the SFS. In fact, the SFS is supposed to describe engineering measures that would allow for all RIM to be reached and safely removed. Please reconsider this statement.

Appendix E and Environmental Monitoring Plan related comments:

- EPA Specific Comments Nos. 18, and 60 through 68
- EPA Additional Comment No. 6 (partial)
- MDNR Section-Specific Comments Nos. 51, 52, 55, 57, 58, 61, and 117

MDNR Feedback:

1. The first sentence of the discussion for response to EPA Specific Comment No. 64, page 4, states, "RIM would be encountered during the "Complete Rad Removal" alternatives and might be encountered during cut/fill activities prior to cap placement under the ROD remedy." The department notes that relocation of large volumes of radiological wastes on Areas 1 and 2 are not specified in the ROD remedy.
2. In addition to referencing air quality standards (10 CSR Chapter 6) as stated in the discussion for response to MDNR Section-Specific Comment No. 51, please consider including these standards in the ARAR determination.
3. MDNR requests that the response to MDNR Section-Specific Comment No. 52 include discussion and revisions to the SFS report that demonstrates the risks associated with vegetation clearing will be thoroughly evaluated during the Remedial Design. It is also noted that this response should refer to MDNR Section-Specific comment No. 52, not 53.
4. MDNR suggests that the response to MDNR Section-Specific Comment No. 55 include discussion and revisions to the SFS report that additional radon monitoring events to verify compliance with radon emissions may be conducted during the 5-year reviews for this site.
5. MDNR accepts the proposed revision to the SFS report in response to MDNR Section-Specific Comment No. 57.
6. MDNR accepts the proposed revision to the SFS report in response to MDNR Section-Specific Comment No. 58.
7. MDNR accepts the proposed revision to the SFS report in response to MDNR Section-Specific Comment No. 61.
8. MDNR accepts the proposed revision to the SFS report in response to MDNR Section-Specific Comment No. 117.
9. Appendix E, Section 2.2.1 Remediation Control Monitoring During Construction of the ROD Remedy, page 11 – The second sentence states, "Some RIM might be moved during cut and fill operations that would be necessary for regrading of the surfaces of Areas 1 and 2." The department notes that relocation of large volumes of radiological wastes on Areas 1 and 2 are not specified in the ROD remedy.
10. Appendix E, Section 2.2.1.1 Remediation Control Surveys, second paragraph, page 12 – the last sentence of this paragraph states, "A 50 percent reduction in excavation production was

assumed to calculate estimated survey costs." This estimate seems to be high. MDNR recommends contacting the U.S. Army Corps of Engineers for surveys conducted at FUSRAP.

11. Appendix E, Section 2.2.2.1 Remediation Control Surveys, third paragraph on page 15 titled "Surveys conducted for waste acceptance criteria". This paragraph should include discussion of conducting surveys on railcars should an on-site rail spur be utilized.
12. Appendix E, Section 4.1.2 Long-term Groundwater Monitoring, fifth paragraph, page 26 – This paragraph gives specific sampling frequencies after three and five years. MDNR suggests this be revised to state that these are estimated sampling frequencies for the purposes of the SFS and are subject to change once the results from the baseline monitoring are obtained and after the RD/RA is final.

EPA Specific Comment No. 59, EPA Additional Comments No. 4 and No. 9, and MDNR General Comment No. 7 and Section-Specific Comment No. 41 – ROD Remedy Cover Thickness and CAP Design

MDNR Feedback:

The sixth paragraph of the discussion contains a statement, “The continued presence of radionuclides at the site is no different than the presence of volatile organic compounds, trace metals or poly nuclear aromatic hydrocarbons that are present at other CERCLA sites.” Although this statement may be appropriate within the context presented, it may be worthwhile to briefly restate the special considerations being given to the radiological contamination which forms the basis for this SFS.

In general, MDNR agrees with the statement in the second last paragraph that states, “The configurations of the landfill covers considered in the SFS represent a **conceptual level** of detail suitable for a feasibility level evaluation.” [emphasis added]. Subsequent discussion with EPA indicates that additional research may be necessary to select the best cover design for the climate in which this site is located and the nature of contaminants contained within. It is the understanding of the department that ongoing studies are being conducted on various cover components, proper orientation of these components as well as longevity and performance and that this information will be considered during the Remedial Design for West Lake Landfill.

**EPA Additional Comment No. 3 and portions of Additional Comments No. 6 and 9 –
Office of Superfund Remediation & Technology Innovation (OSRTI) Memorandum**

MDNR Feedback:

In regards to the fourth paragraph of the discussion, it is MDNR's position that an effective groundwater monitoring network may indeed include offsite groundwater monitoring to meet the Threshold Criteria of Overall Protection of Human Health and the Environment. Although the point of compliance is in fact the property boundary, assurance that compliance is being met is reinforced with offsite groundwater monitoring. MDNR recalls discussion of including offsite monitoring wells in a meeting held on January 22, 2009 during development of the Remedial Design Work Plans. MDNR feels that the need for offsite groundwater monitoring can be determined in the Remedial Design.

EPA Specific Comments No. 35 and 41 – RIM Excavation Intersection with Adjacent Landfill Cells

MDNR Feedback:

It was noted in the discussion that there is a discrepancy in the naming convention for the various portions of the landfill. In particular, the “Inactive Demolition Landfill” and “Closed Sanitary Landfill” have historically been referred to as Closed Demolition Landfill and Inactive Sanitary Landfill respectively. Please revise for consistency.

Overall, MDNR accepts the response to these comments.

**EPA Additional Comments No. 18 and 19 and MDNR Section-Specific Comments No. 49
and 50 – Remedial Action Objectives**

MDNR Feedback:

MDNR accepts the proposed SFS text revisions presented in this response.

MDNR Section-Specific Comments Nos. 36 and 37 – Putrescible Waste

MDNR Feedback:

MDNR understands that additional characterization of the waste materials in Areas 1 and 2 is outside the scope of the SFS. However, MDNR adds that this is an important factor in determining the remedial actions for this site. Thus it is suggested that additional information from other ongoing studies at the landfill be investigated to better understand the nature of the waste material located in Areas 1 and 2.

**EPA Specific Comments No. 32, 43 and 49 – Creation of Contaminant Plume by RIM
Excavation**

MDNR Feedback:

In addition to the controls and techniques listed in the first paragraph of the discussion for minimizing infiltration during the temporary excavation process, MDNR suggests including use of tarps or temporary structures over excavated areas.

**MDNR General Comment No. 45— Regrading of Areas 1 and 2 to Minimum 5% Slopes
under the “Complete Rad Removal” alternatives**

MDNR Feedback:

MDNR accepts the proposed revised SFS text revisions that reference final cover requirements of the Missouri Solid Waste regulations of minimum sloping requirements of 5% for the new alternatives. MDNR feels that additional thought could be given to minimize the volume of fill necessary to meet this sloping requirement such as utilizing excavated overburden more efficiently.

EPA Specific Comment No. 55 (Waste Settlement)

MDNR Feedback:

MDNR reiterates its position that additional site specific data, such as data regarding settlement, would be beneficial to clarify assumptions, albeit conservative ones, that are made in the SFS.

MDNR Section-Specific Comments Nos. 47, 48, 74, 76 and 91 – Long-Term Monitoring Duration and Cost Estimates

MDNR Feedback:

MDNR Section-Specific Comment No. 47:

The SFS Text Revision in response to MDNR Section-Specific Comment No. 47 should be modified to reflect that this statute Section 260.392 RSMo would not be ARAR but instead upheld as law for this off-site action.

MDNR Section-Specific Comment No. 48:

Has EMSI considered Tennessee's Bulk Survey for Release (BSFR) program as a possible candidate for receiving RIM under the off-site disposal alternative? Also, please include the tables of sites for each disposal facility from the discussion in the SFS.

MDNR Section-Specific Comment No. 74:

MDNR accepts the response to this comment.

MDNR Section-Specific Comment No. 76:

Please add the discussion from this response to comment as part of the SFS text after the sentence referenced in MDNR's original comment.

MDNR Section-Specific Comment No. 91:

MDNR accepts the response to this comment.

EPA Specific Comment No. 42 and MDNR General Comments Nos. 54 and 63 – On-site Cell Capacities

MDNR Feedback:

The references to MDNR comments should be “Section-Specific” comments, not “General” comments.

The fourth paragraph of the discussion references an email from David Johnson of MDNR. Please identify what program Mr. Johnson is affiliated with. Also, future correspondence on matters pertaining to Solid Waste regulations at West Lake Landfill should be directed through Shawn Muenks to the Solid Waste Management Program.

The third sentence of the seventh paragraph of the discussion states, “Additionally, it should be noted that no subsurface geological and geotechnical field investigations have occurred in the area proposed for the on-site cell, and piezometric surface data are not available.” Has EMSI researched regional or local data for this area that may indicate piezometric surface?

The last sentence of the seventh paragraph of the discussion states, “If the elevation of the new cell liner needs to be raised by 2.3 feet, excess cell capacity would no longer be available.” MDNR is confused by this statement. Is there an upper elevation limit on the disposal cell? Why couldn’t the entire disposal cell be raised by 2.3 feet?

The last sentence of the first paragraph of SFS Text Revisions titled **6.2.3.6.1 Ability to Construct and Operate the Technology** states, “Directing and controlling the RIM excavation using scanning and sampling techniques will greatly restrict excavation production rates.” MDNR does not agree with this statement. Proper coordination of scanning and sampling techniques should not “greatly restrict excavation production rates”. Consider eliminating this statement.

EPA Specific Comment No. 23 – On-Site Cell Design

MDNR Feedback:

MDNR understands that the configuration of liner design and final cover system may change during the Remedial Design. These configurations are acceptable for the purposes of the SFS.

Responses to Comments on Evaluation of Alternatives Criteria and Other Miscellaneous Comments

- EPA Specific Comments Nos. 4 and 26
- MDNR Comments Nos. 78, 96, 99, 100, and 103

MDNR Feedback:

MDNR Section-Specific Comment No. 78:

The second last sentence of the first paragraph of the discussion states, "Consequently, for purposes of the SFS, costs for treatment were assumed to be relatively high but similar for the three alternatives." MDNR feels that costs for treating stormwater for the ROD Selected Remedy will be much less than the excavation alternatives due to large differences in surface elevations during these remedial actions and time to implement. Consider rethinking some type of comparative analysis.

MDNR Section-Specific Comment No. 96:

MDNR questions the last statement of the discussion that none of the listed sites involved excavation of municipal solid wastes.

MDNR Section-Specific Comment No. 99:

MDNR accepts the response to this comment.

MDNR Section-Specific Comment No. 100:

MDNR accepts the response to this comment.

MDNR Section-Specific Comment No. 100:

MDNR will provide feedback on the revised section provided in conjunction with the response to EPA comment No. 44.

Solids Separation Comments

- EPA Specific Comment No. 17
- EPA Additional Comments Nos. 33 and 46
- MDNR Section-Specific No. 53

MDNR Feedback:

MDNR accepts the response to these comments.

**EPA Specific Comments Nos. 15 and 38 –Waste Acceptance Monitoring and CERCLA
Offsite Disposal Rule**

MDNR Feedback:

MDNR accepts the response to these comments.

EPA General Comment No. 2, EPA Additional Comments No. 1, 2, 14, 15, 16, 30, 37, 42, 44, and 47 and MDNR Section-Specific Comments 19 and 116 – RIM Characterization

MDNR Feedback:

Section 3.2 General Locations of RIM Occurrences, second last sentence of fourth paragraph, page 2 – The reference should be NRC (1988 and 1982).

Section 3.3.5 Summary of General Distribution of RIM, page 8 – MDNR would like to see the statement from the last paragraph of Section 3.5 included in this section that states, “Finally, both studies concluded that the majority of the RIM is located within approximately 15 feet of the ground surface.” MDNR feels that this statement sums up the distribution of RIM in the most concise and easily understood manner for the reader.

Section 3.4 Depth of RIM Occurrences, bulleted list, page 12 – Would a fourth bullet be warranted that states something to the effect that differences in depth of downhole readings may be attributable to smearing or sluffing of contaminated material during drilling operations?

EPA Additional Comments Nos. 5, 6 (partial), 10, 17 (partial), 21, 28, and 29 and MDNR 15, 16, 17, 88 and 116 – Site, Groundwater, Waste, Land-Use Conditions and Buffer Zone/Crossroad Property

MDNR Feedback:

The note at the end of EPA Additional Comment No. 17 on page 3 should refer to No. 17 not 27.

Section 2.1.1 Site Features and Landfill Operations, page 1 – The last sentence of the first paragraph states, “The quarrying operation continued until 1988 and resulted in two quarry pits, the North Quarry Pit and the South Quarry Pit, which were excavated to maximum depth of 240 ft below ground surface (bgs) (Herst & Associates, 2000).” It appears in Figure 6 that a portion of OU-1 Area 1 overlaps the North Quarry Pit. Please verify this and include a brief description of this in the report.

Section 2.1.1 Site Features and Landfill Operations, page 2 – The last sentence of the third paragraph of this section states, “The Bridgeton Sanitary Landfill has since been closed pursuant to its permit and is in post-closure status.” This should be revised to state that the Bridgeton Sanitary Landfill is currently being closed pursuant to its permit and will then be placed in post-closure status. It is our understanding that this portion of the landfill has stopped receiving waste but has not officially been closed according to Missouri Solid Waste regulations.

Section 2.1.1 Site Features and Landfill Operations, page 3 – The last sentence of this section states, “Ford retained the 1.78 acres immediately adjacent to the western portion of the northern boundary of Area 2, referred to as the Buffer Zone, the ownership of which was subsequently acquired by Rock Road Industries, Inc. (Rock Road) on behalf of the Respondents.” Please reference Figure 10 and the parcel number that is associated with this piece of property.

Section 2.3.1.1 Radionuclide Occurrences in Soil/Waste, page 11 – The third paragraph of this section describes reference levels for concentrations of radium-226 (or radium-228) as “5 pCi/g averaged over the first 15 cm of soil below the surface and 15 pCi/g averaged over 15 cm thick layers of soil more than 15 cm below the surface”. Please include an explanation that 5 pCi/g will be used to depth for West Lake Landfill. Also please provide a reference to which section in the SFS that gives the remediation standards for this site.

Section 2.3.1.1.3 Radiological Occurrences on the Ford and Crossroad Properties, page 13 – the first sentence of the fifth paragraph of this section states, “A subsequent inspection of this area indicated that additional soil removal/regrading had been performed on the remaining portion of the Crossroad property and the adjacent Buffer Zone property by, or on the behalf of, AAA Trailer.” Please include when this inspection was conducted. The fourth sentence of this paragraph goes on to state, “Trailers associated with AAA Trailer’s operations have been parked in this area although use of the Buffer Zone for this purpose, which is owned by the Respondents, has not been authorized.” Has this issue been resolved? If so, please explain.

EPA Additional Comments Nos. 11, 12, 13, 26, and 38 – Report Organization

MDNR Feedback:

MDNR accepts the revisions to Section 1.

Off-site Transportation and Disposal Comments

- EPA Specific Comment No. 28
- EPA Additional Comments Nos. 27 and 45
- MDNR Section-Specific Comments Nos. 62, 92, and 108

MDNR Feedback:

Response to MDNR Section-Specific Comment No. 62:

Please specifically state that an onsite rail spur is (or may be) feasible in the proposed revised text for Section 5.5.3. MDNR would also like to see an estimate for construction of the onsite rail spur in order to compare with estimated savings in shipping costs.

Response to MDNR Section-Specific Comment No. 92:

Please reword the first sentence of the proposed revision of Section 6.2.2 to state that extending a rail spur onto the site may be feasible.

EPA Specific Comment No. 29 – Compliance with ARARs

MDNR Feedback:

Revised Section 6.2.2.2.2 Off-site Transportation Requirements:

Please include Missouri Revised Statute 260.392 (fees for transport of radioactive waste) as a statutory component of the off-site transportation requirements (non-ARAR). Also, please check that this statute is included in the appropriate tables/sections within the SFS document.

Revised Section 6.2.2.2.5 Clean Water Act:

Please include a citation for the Clean Water Act.

Comments Related to the DOE Mound Site

- EPA Specific Comment No. 45
- MDNR Section-Specific Comment No. 111

MDNR Feedback:

Please include a discussion in the proposed revised text for Section 7.2.5 on how additional characterization of the waste material during the RD will affect overall costs of the remedy (i.e. how will additional characterization help avoid cost overruns?).

EPA Specific Comment No. 48 – RCRA Subtitle C as a potential ARAR

MDNR Feedback:

The revised Table 3 will also need to include those ARARs identified by MDNR which were further identified by EMSI as Action-Specific ARARs and TBC Criteria.

EPA Specific Comment Nos. 69 and 70 and MDNR Section-Specific Comments Nos. 95, 102, 110 and 112 – Fiscally-Constrained Remedy Implementation Schedules and Cost Estimates

MDNR Feedback:

MDNR accepts the proposed SFS text revisions in response to these comments.

EPA Additional Comment No. 8 – Stormwater Management

MDNR Feedback:

MDNR reiterates its position that use of temporary enclosures to protect the exposed excavations is a viable technology (see MDNR Feedback to EPA Additional Comment No. 7).

EPA Additional Comment No. 22 – Treatment

MDNR Feedback:

The third sentence of the fourth paragraph of the Discussion states, "Because there is no groundwater or surface water contamination, technologies applicable to liquid media were not reviewed; however, some of these technologies may potentially be applicable to the treatment and handling of leachate or contaminated stormwater in the event that these media would be encountered during implementation of a remedial action at the West Lake site." Is it factual to state that there is no groundwater contamination? Please consider amending this statement to reflect groundwater data. Additional explanation may be necessary to convey to the reader how the inward gradient produced by the leachate collection system is currently controlling offsite migration of contaminants.

EPA Additional Comments No. 23 and 24 – Feasibility Study Process

MDNR Feedback:

The Discussion mentions that the on-site disposal alternative would likely have been screened out based on concerns raised by the St. Louis Airport Authority and the existence of the Negative Easement and Declaration of Restrictive Covenants Agreement. MDNR reiterates its position that these should not preclude remedial actions or prematurely negate the implementability of the new alternatives.

EPA Additional Comment No. 31 – Technology Evaluations

MDNR Feedback:

MDNR is not familiar with the term “wholesale excavation” that is used in the first paragraph of the revised Section 4.2. Please provide more detail on what this entails.

Comments Regarding SLAPS and FUSRAP Experience

- EPA Additional Comment 32
- MDNR General Comment 4

MDNR Feedback:

EPA Additional Comment 32:

The first part of the discussion gives a bulleted list of pertinent information from the SLAPS second Five Year Review. The fifth bullet states, "Excavation used conventional excavators, loaders, and short-haul dump trucks. A rail spur was constructed and is used to load excavated material into rail cars, which in turn transported the excavated materials to off-site licensed disposal facilities." Please identify which off-site licensed disposal facility was used for SLAPS.

The third last paragraph of the discussion states, "Although both the SLAPS sites and West Lake contain radioactive materials, the nature of the sites as well as the nature and distribution of the contamination are very different." MDNR acknowledges there are differences between these sites but also notes that the radiological constituents originated from the same source and therefore have remedial components that may be similar.

The second last paragraph of the discussion begins by describing future land use at the West Lake Landfill in order to contradict remedial actions carried out at SLAPS which were cleaned up to unrestricted use. Please bear in mind that the intent of "complete rad removal" alternatives was to "remove radionuclides from Areas 1 and 2 to the degree feasible such that additional engineering or institutional controls would not be required due to the radiological content of these areas" (SFS Work Plan, EMSI, 2010). MDNR considers this similar to remedial actions at SLAPS. Also, the analogy presented in the second last paragraph of the discussion is a poor comparison since there are no "inaccessible soils" at West Lake Landfill as defined by the SLAPS ROD. Please consider removing this paragraph.

The last paragraph of this discussion attempts to make an argument between contamination depths at SLAPS and West Lake Landfill. MDNR is not convinced that deep radiological contamination exists at West Lake Landfill (See MDNR General Comment #1). In addition, the revised Section 3.3 of the SFS concludes that the RI report and NRC findings are generally consistent in that the majority of the RIM is located from two to fifteen feet below surface. Please consider removing this paragraph as well.

MDNR General Comment 4:

MDNR accepts this response and encourages continued communication with these and other appropriate agencies through the entire remedial process.

EPA Additional Comment No. 35 – Feasibility of On-site Cell

MDNR Feedback:

MDNR disagrees with the discussion and proposed text revisions that the on-site disposal cell is unlikely to be administratively feasible. The on-site disposal cell should be considered administratively feasible for the purposes of this SFS. Actual administrative processes to make this alternative feasible should be dealt with at the appropriate time. (See MDNR Feedback to Response to Comments titled **Proximity to St. Louis Lambert International Airport** within "Batch 1" of feedback).

EPA Additional Comments Nos. 40 and 41 and MDNR Section-Specific Comment No. 20 – Uranium Cleanup Level

MDNR Feedback:

MDNR does not have a copy of the “Record of Decision for the St. Louis Airport Site (SLAPS)”. Please provide a copy of Section 2.1.2 of the St. Louis Airport Site (SLAPS) ROD which contains the detailed risk calculations for uranium cleanup level of 54.5 pCi/g. Also, as stated in MDNR Section-Specific Comment No. 20, MDNR stands by its position that adding background to the uranium cleanup level is not an appropriate method for a risk-based value. A risk-based cleanup goal represents the maximum allowable concentration that is acceptable for risk to human health. Adding background to this value will exceed allowable risk.

EPA Additional Comment No. 43 – Buffer Zone/Crossroad Survey

MDNR Feedback:

MDNR accepts this response and agrees that remediation of the Buffer Zone/Crossroads property should be determined after MARSSIM survey is conducted during the RD.

MDNR Section-Specific Comments Nos. 21, 22 and 120 – Background Values

MDNR Feedback:

MDNR accepts this response with the understanding that further evaluation of background values will be conducted during the RD.

**RESPONSE TO EPA COMMENTS 24, 31 AND 39 – LONG-TERM RISK
CALCULATIONS PRESENTED IN SUBSECTIONS 6.2.1.3.1, PAGE 92; 6.2.2.3.1, PAGE
102; AND 6.2.3.3.1, PAGE 114**

MDNR Feedback:

MDNR accepts this response and proposed text revisions.

EPA Specific Comment # 33 – Risks to the Public

MDNR Feedback:

MDNR reemphasizes that an on-site rail spur would eliminate risks associated with trucking radiological waste on public highways between the site and an off-site rail spur. MDNR also reiterates the need for a comprehensive air monitoring program during site activities including vegetation clearing. MDNR will review the proposed revisions in the final SFS report to ensure that the changes adequately address this issue.

EPA Specific Comment # 46: Table 1, Missouri Radiation Regulations, Protection Against Ionizing Radiation

MDNR Feedback:

MDNR considers these regulations to be ARAR.

Appendix F: Evaluations of Potential Risks Associated with the Alternatives

EPA Appendix F – Risk Assessment Comments #1-40, Additional Comments #48, 49, 50, 51, MDNR Appendix F Comments #118-138

MDNR Feedback:

MDNR generally accepts these responses to comments on Appendix F. MDNR will review the revised Appendix F in the final SFS report to ensure that the revisions adequately address the issues presented in the comments.

MDNR Appendix F – Section-Specific Comment No. 135:

Please provide a copy of the Summary Report and Health Risk generated by RESRAD on compact disk.

**MDNR General Comment No. 11 and Section-Specific Comments Nos. 28, 82, and 83 –
Radon Emissions and Radon Control**

MDNR Feedback:

MDNR accepts the proposed revisions; however, a review of the final SFS report in its entirety will be made to ensure these issues are addressed.

Implementability Comments

- EPA Specific Comments Nos. 44 and 50
- MDNR Section-Specific Comment No. 90

MDNR Feedback:

There are numerous issues brought forth by MDNR in other comments that reemerge within the proposed revisions. Namely, these are as follows:

- Waste Relocation under ROD Remedy Alternative (MDNR General Comment #2).
- Airport Negative Easement/FAA Advisory (MDNR General Comment #3).
- On-site Rail Spur (MDNR Section-Specific Comments Nos. 62, 92, and 108).

Please be aware of these issues when incorporating revised sections into the final SFS report. MDNR will review the final SFS report in its entirety to ensure consistency throughout the document pertaining to these issues.

Revised Section 6.2.1.6.6 Coordination with Other Agencies

Please include MDNR and adjacent property owners as agencies that would require coordination under implementation of the ROD remedy. MDNR will provide direction on remedial actions as they pertain to Missouri Solid Waste Regulations. Nearby property owners will need to be contacted for possible land disturbance issues.

Revised Section 6.2.2.6.1 Ability to Construct and Operate the Technology

The second sentence of this section states, "However, there are unique circumstances associated with excavation of RIM in Areas 1 and 2, located within an overall larger closed landfill site, which will complicate implementation of standard excavation technologies." Also the next sentence refers to "the OU-2 closed construction and demolition waste landfill" and later in the paragraph the "Closed Sanitary Landfill". MDNR would like to point out that currently there are no "closed" landfill portions at West Lake Landfill. There are several areas currently undergoing closure through the department's Solid Waste Management Program, but none have officially been closed yet.

The seventh paragraph of this section that starts with, "Stormwater management..." discusses dewatering, collection, treatment, and disposal of stormwater which may come in contact with RIM. Please consider including on-site treatment and disposal to MSD as an added option.

Revised Section 6.2.2.6.6 Coordination with Other Agencies

Please include MDNR and adjacent property owners as agencies that would require coordination under implementation of the off-site disposal alternative. MDNR will provide direction on remedial actions as they pertain to Missouri Solid Waste Regulations. Nearby property owners will need to be contacted for possible land disturbance issues.

Also, the fourth bullet under discussion about the rail spur states that, "The long-term leases of the asphalt plant, concrete batch plant, trucking company, and potential other tenants who lease land south of the solid waste transfer facility would need to be renegotiated or otherwise acquired;". Please be aware that the concrete batch plant is no longer in operation.

Revised Section 6.2.3.6.1 Ability to Construct and Operate the Technology

The first sentence of the third paragraph states, "The estimated available landfill disposal volume in the on-site cell conceptual design is based on a bottom liner elevation that is situated at the minimum allowable separation from extrapolated information on the piezometric surface in this area." Please identify this extrapolated piezometric surface elevation.

MDNR General Comment #81 Section 6.2.1.1

MDNR Feedback:

MDNR accepts this response.

MDNR Section-Specific Comments Nos. 24, 27, 29, 30, 32, 42, 43, 67, 75, 98, 105, 113, 114, and 115 – ARARs

MDNR Feedback:

MDNR Section-Specific Comment No. 42, last paragraph of proposed SFS Text Revision. Missouri Solid Waste Regulation 10 CSR 80-3.010(3)2 B; before asking EPA to grant a waiver for this particular regulation, the ARAR determination may be addressed by simply explaining why it would not be considered ARAR (i.e. it is relevant but not appropriate to an on-site remedial action).

MDNR generally accepts the remaining discussions and proposed SFS text revisions associated with this set of comments; however, MDNR will review the final SFS report in its entirety for context and consistency regarding these issues.

MDNR offers the following redline ARAR table (Table 1: Evaluation of MDNR Potential ARARs List) for clarification and/or additional response.

Potential ARAR	Description	Evaluation
10 CFR 40, Appendix A, Criteria 6(6)	NRC Regulations - Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content	Not applicable or relevant and appropriate. UMTRCA standards include similar controls and are considered more appropriate. <u>Please give explanation why sum of ratios would not be needed since there are multiple radionuclides. Please state what parts of UMTRCA are similar and include provisions for multiple radionuclides?</u>
40 CFR 192	UMTRCA radiation cleanup standards applied to entire landfill	Certain sections of these standards were previously identified and included in SFS as potentially relevant and appropriate.
15 U.S.C. 2605	Toxic Substances Control Act	Not applicable or relevant and appropriate. PCB regulations and asbestos NESHAP provide more specific standards. <u>MDNR would like to see this included along with PCB regulations and NESHAP.</u>
40 CFR 761	PCB regulations	Potential action-specific ARAR if PCBs are encountered during remedy implementation.
40 CFR 61	NESHAPs standards for asbestos handling	Potential action-specific ARAR if RACM is encountered during remedy implementation.
40 CFR 141	National Primary Drinking Water Regulations	Potentially relevant but the equivalent state drinking water standards (10 CSR 60-4) which were identified as potentially relevant and appropriate in the draft SFS, are considered to be more appropriate requirements. <u>The NCP specifically references Federal MCLs and the remediation must comply with these regulations.</u>

10 CSR 80-2.010	Missouri Solid Waste Regulations Definitions	Only provides definitions of terms not standards of control so not ARAR but may be used in conjunction with application of other aspects of the solid waste regulations that may potentially be ARARs.
10 CSR 80-2.015	Preliminary Site Investigation, Detailed Site Investigation Workplan, and Detailed Site Investigation and Characterization Report	Primarily administrative requirements (state approval and procedures) so not an ARAR. Substantive requirements of Appendix 1 may be relevant and appropriate to characterization of a location for a new disposal cell
10 CSR 80-2.020	Permit Issuance, Construction Permits, Operating Permits, Emergency Permits, and Exemptions	Administrative requirements and therefore not an ARAR. <u>There are substantive requirements of a permit application that may be ARAR (i.e. documentation necessary to ensure construction requirements have been met).</u>
10 CSR 80-2.021	Permit Issuance, Special Operating Permits and Permit Exemptions	Outdated regulation no longer in effect.
10 CSR 80-2.030	Solid Waste Disposal Area Closure, Post-Closure Care and Corrective Action Plans and Procedures with Associated Financial Assurance Requirements	Primarily administrative requirements (plan approvals, schedule requirements, financial assurance, etc.) so not an ARAR. <u>These submittals can be substantive in nature to ensure requirements have been met. Requirements for excavation of waste may be relevant and appropriate to preparation of remedial design documents.</u>
10 CSR 80-2.031	Solid Waste Disposal Area Closure and Excavation Procedures	Outdated regulation no longer in effect.
10 CSR 80-3.010	Design and Operation (all)	Previously identified and included in SFS as potentially relevant and appropriate.
40 CFR 261, as incorporated by reference in 10 CSR 25-4.261	Identification and Listing of Hazardous Waste	Potential action-specific requirement if hazardous wastes are encountered during remedy implementation.
40 CFR Part 262, as incorporated by reference in 10 CSR 25-5.262	Standards Applicable to Generators of Hazardous Waste	Requirement for hazardous waste determination may be an action-specific ARAR if hazardous wastes are encountered during remedy implementation.
40 CFR Part 263, as incorporated by reference in 10 CSR 25-6.263	Standards Applicable to Transporters of Hazardous Waste	Potential action-specific requirement if hazardous wastes are encountered during remedy implementation and are shipped offsite.
40 CFR Part 264 Subpart F, as incorporated by reference in 10 CSR 25-7.264(2)(F)	Releases from Solid Waste Management Units (i.e., monitoring and management of contaminated groundwater)	Not applicable or relevant and appropriate as site is not a hazardous waste facility and waste materials are not sufficiently similar to hazardous wastes.
40 CFR Part 264 Subpart G, as incorporated in 10 CSR 25-7.264(2)(G)	Closure and post-closure care of all hazardous waste management facilities	Not applicable or relevant and appropriate as site is not a hazardous waste facility and waste materials are not sufficiently similar to hazardous wastes. <u>May be if haz waste is found.</u>

40 CFR Part 264 Subpart I, as incorporated by reference in 10 CSR 25-7.264(2)(I)	Use and Management of Containers	Potentially applicable action-specific ARAR if hazardous wastes are encountered and stored in containers during remedy implementation.
40 CFR Part 264 Subpart N, as incorporated by reference in 10 CSR 25-7.264(2)(N)	Land disposal and/or capping of past disposal areas	Not applicable or relevant and appropriate as site is not a hazardous waste facility and waste materials are not sufficiently similar to hazardous wastes. <u>May be if haz waste is found.</u>
40 CFR Part 264 Subpart CC, as incorporated by reference in 10 CSR 25-7.264(1), and the additional state requirements found at 10 CSR 25-7.264(2)(CC)	Air Emission Standards for Tanks, Surface Impoundments, and Containers	Not applicable or relevant and appropriate as site is not a hazardous waste TSD facility and waste materials are not sufficiently similar to hazardous wastes. On-site treatment of hazardous waste not included in scope of potential remedial actions. <u>What if PTW is found and requires treatment?</u>
40 CFR Part 264 Subpart N, as incorporated by reference in 10 CSR 25-7.268(1)	Land Disposal Restrictions	Potential action-specific requirement if hazardous wastes are encountered during remedy implementation and are shipped offsite.
40 CFR 264.554, as incorporated by reference in 10 CSR 25-7.264	Staging Piles	Potential action-specific requirement if hazardous wastes are encountered during remedy implementation and temporarily stored in waste piles on-site.
40 CFR 50	National Ambient Air Quality Standards (NAAQS)	Standards for radionuclides, radon and particulate matter potential action-specific requirements.
10 CSR 10-3	Air Pollution Control Rules Specific to the Outstate Missouri Area	Not an ARAR as applicable to motor vehicle emissions and only outside of the St. Louis area. <u>Please elaborate.</u>
10 CSR 10-5.160	Control of Odors in the Ambient Air	Regulation rescinded 11-30-2010.
10 CSR 10-6	Air Quality Standards, Definitions, Sampling Reference Methods and Air Pollution Control Regulations for the Entire State of Missouri	See evaluations of individual sections below.
10 CSR 10-6.010	Ambient Air Quality Standards	PM-10 standards potentially relevant and appropriate action-specific requirements.
10 CSR 10-6.020(3)(A)	Table 1-DeMinimis Emission Levels	PM-10 and NMOC standards potentially relevant and appropriate action-specific requirement.
10 CSR 10-6.030	Sampling Methods for Air Pollution Sources	Potential action-specific requirement if a landfill gas flare is constructed and operated as part of the remedy.
10 CSR 10-6.060(12)(J)	Air Quality Analysis for Hazardous Air Pollutants	Establishes a requirement for MDNR to set threshold levels but does not contain specific standards or controls. <u>Need more reasoning.</u>
10 CSR 10-6.130	Controlling Emissions During Episodes of High Air Pollution Potential	Potentially could require shut down of construction operations during a purple or maroon air quality event. <u>Unclear on ARAR determination.</u>

10 CSR 10-6.170	Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin	Potentially applicable action-specific ARAR for fugitive dust emissions
640.100 - 640.140, RSMo.	Safe Drinking Water Law	Other regulations are more appropriate <u>Such as?</u>
643.010 - 643.620, RSMo.	Missouri Air Conservation Law	Other regulations are more appropriate <u>Such as?</u>
644.006 - 644.141, RSMo.	Missouri Clean Water Law	Other regulations are more appropriate <u>Such as?</u>
40 CFR 122	National Pollutant Discharge Elimination System (NPDES)	Not applicavble or relevant and appropriate as remedial action will not entail direct discharge. <u>What about stormwater?</u>
40 CFR 131	Water Quality Standards	Potentially relevant but the state water quality standards, in particular the state groundwater quality standards (10 CSR 20-7.031), are considered to be more appropriate requirements for development of groundwater performance standards. <u>Include the state groundwater quality standards.</u>
10 CSR 20-2	Missouri Clean Water Commission Definitions	Only provide definitions of terms not standards of control so not ARARregulations that may potentially be ARARs.
10 CSR 20-7	Water Quality	See below.
10 CSR 20-6.200	Missouri Storm Water Regulations	Substantive requirements potential action-specific ARAR
10 CSR 20-7.015	Effluent Regulations	Not applicable or relevant and appropriate as remedial action will not entail direct discharge. <u>What about stormwater?</u>
10 CSR 20-7.031	Water Quality Standards	State groundwater standards are potential chemical-specific requirements for development of groundwater performance standards.
42 U.S. Code 10171, Sec. 151	Nuclear Waste Police Act of 1982, Subtitle D - Low-Level Radioactive Waste; Financial Arrangements for Low-Level Radioactive Waste Site Closure	Not applicable or relevant and appropriate. <u>Please give explanation.</u>